Exercise 4.1

Question 1:

Construct the following quadrilaterals:

(i) Quadrilateral ABCD
AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm, AC = 7 cm

(ii) Quadrilateral JUMP
JU = 3.5 cm, UM = 4 cm, MP = 5 cm, PJ = 4.5 cm, PU = 6.5 cm

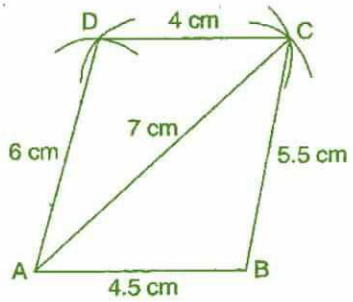
(iii) Parallelogram MORE
OR = 6 cm, RE = 4.5 cm, EO = 7.5 cm

(iv) Rhombus BEST
BE = 4.5 cm, ET = 6 cm

Answer 1:

(i) **Given**: AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm, AC = 7 cm
To construct: A quadrilateral ABCD
Steps of construction:

(a) Draw AB = 4.5 cm.
(b) Draw an arc taking radius 5.5 cm from point B.
(c) Taking radius 7 cm, draw another arc from point A which intersects the first arc at point C.
(d) Join BC and AC.
(e) Draw an arc of radius 6 cm from point A and draw another arc of radius 4 cm from point C which intersects at D.
(f) Join AD and CD.

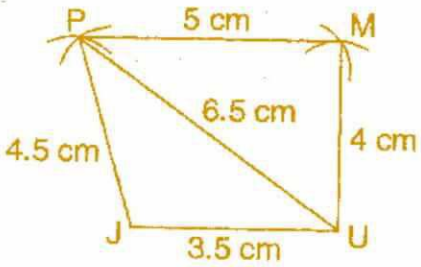


It is required quadrilateral ABCD.

(ii) **Given**: JU = 3.5 cm, UM = 4 cm, MP = 5 cm, PJ = 4.5 cm, PU = 6.5 cm
To construct: A quadrilateral JUMP
Steps of construction:

(a) Draw JU = 3.5 cm.
(b) Draw an arc of radius 4.5 cm taking centre J and then draw another arc of radius 6.5 cm taking U as centre. Both arcs intersect at P.
(c) Join PJ and PU.
(d) Draw arc of radius 5 cm and 4 cm taking P and U as centres respectively, which intersect at M.
(e) Join MP and MU.

It is required quadrilateral JUMP.



(iii) **Given**: OR = 6 cm, RE = 4.5 cm, EO = 7.5 cm

To construct: A parallelogram MORE.

Steps of construction:

(a) Draw OR = 6 cm.

(b) Draw arcs of radius 7.5 cm and radius 4.5 cm taking O and R as centres respectively, which intersect at E.

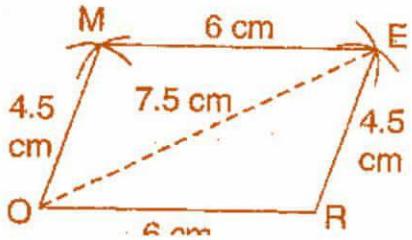
(c) Join OE and RE.

(d) Draw an arc of 6 cm radius taking E as centre.

(e) Draw another arc of 4.5 cm radius taking O as centre, which intersects at M.

(f) Join OM and EM.

It is required parallelogram MORE.



(iv) **Given**: BE = 4.5 cm, ET = 6 cm

To construct: A rhombus BEST.

Steps of construction:

(a) Draw TE = 6 cm and bisect it into two equal parts.

(b) Draw up and down perpendiculars to TE.

(c) Draw two arcs of 4.5 cm taking E and T as centres, which intersect at S.

(d) Again draw two arcs of 4.5 cm taking E and T as centres, which intersects at B.

(e) Join TS, ES, BT and EB.

It is the required rhombus BEST.